Report of the
ntario Council
of Health on

1970
Supplement No. 8

Health Care Delivery Systems

Dental Care Services

Ontario Department of Health
Honourable A. B. R. Lawrence, M.C., Q.C., Minister

HEALTH CARE DELIVERY SYSTEMS

Dental Care Services

ONTARIO

REPORT OF THE ONTARIO COUNCIL OF HEALTH

on

HEALTH CARE DELIVERY SYSTEMS

DENTAL CARE SERVICES

1970

SUPPLEMENT NO. 8

ONTARIO DEPARTMENT OF HEALTH
Honourable A. B. R. Lawrence, M.C., Q.C., Minister

THE ONTARIO COUNCIL OF HEALTH

The Ontario Council of Health was formed in 1966 as the senior advisory body on health matters to the Minister of Health and, through him, to the Government of Ontario. Council submits recommendations designed to support the overall thrust toward improved health services and it serves as a sentinel to ensure effective and economical employment of the human and physical elements required to provide these services.

The members of Council are selected to reflect a reasonable balance of public interest, expert knowledge, experience, and geographic distribution. In keeping with Council's ongoing role, members are appointed for three years on a rotational basis and may be reappointed once.

Council determines its work priorities through assessment of provincial health services requirements, tempered from time to time by more urgent requests. The successful completion of its assignments is dependent upon the able assistance of committees, sub-committees and task forces manned from the ample reservoir of health interest and expertise to be found in individuals throughout Ontario.

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J. R. Evans, M.D., D.Phil. (Oxon), F.R.C.P. (C), F.A.C.P.	Dean, Faculty of Medicine, Principal, Health Sciences, McMaster University, Hamilton
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* Term expired November 1970

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THE ONTARIO COUNCIL OF HEALTH IN 1970

A first "Report on the Activities of the Ontario Council of Health" was published during 1970. It consisted of a summary document with eight separate annexes containing individual committee reports and recommendations as acted upon by Council. The period covered was from Council's formation in 1966 through the calendar year 1969.

SUPPLEMENTS FOR 1970 – GENERAL

The initial report has proven useful to many individuals and groups concerned with the health care of the people of Ontario. It was therefore decided to make available the major committee reports and recommendations which were processed through Council during 1970. This was substantially a continuation of the work initiated during the first report period, relating directly to committees identified in the annexes. Therefore, it was decided to issue the new report in the form of nine separate supplements, of which this document is one. These supplements, cross-referenced to their original annexes by title, are listed below:

Supplement No. 1
Regional Organization of Health Services
Part II – A Proposed System

Supplement No. 2
Health Statistics
Part II – Implementation of a Health Statistics System

Supplement No. 3
Health Manpower
A. The Need for Family Physicians and General Practitioners for the Province of Ontario
B. Assistance for the Primary Care Physician

Supplement No. 4
Library and Information Services
Library Personnel, Manpower and Education

Supplement No. 5
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Supplement No. 8
Health Care Delivery Systems
Dental Care Services

Supplement No. 9
Health Care Delivery Systems
Role of Computers in the Health Field

1970 SUPPLEMENT – DENTAL CARE SERVICES

This report, prepared by the Sub-committee on Dental Care Services, was presented to the Ontario Council of Health in June 1970.

The Sub-committee on Dental Care Services was set up as a Sub-committee on Health Care Delivery Systems to propose recommendations for improved arrangements for the delivery of dental care services to the citizens of Ontario. The Sub-committee was asked to take into account previous recommendations concerning dental care, within the reports to Council in October 1969, from the Committee on Health Manpower and the Committee on Education of the Health Disciplines.

The Sub-committee agreed that consideration of the present methods and system of delivery of preventive dentistry was of basic importance in the consideration of dental care, and of prime importance in the system of dental care services. They also agreed that present and future patterns of education of dentists and dental care professionals, in particular dental hygienists, were of basic importance in determining not only the manpower requirements but the system of delivery of dental care services.

In its deliberations, the Sub-committee reviewed the literature

relating to preventive dentistry, the education of dental personnel, and the organization of dental care services. As well as the reports of the committees of the Ontario Council of Health, submissions to other government advisory bodies, both provincial and federal, relating to dental care were studied. Special presentations, by interview or in writing, were received from university personnel and representatives of dental and allied professional bodies expert in the fields under discussion, both for information and for opinion.

In certain fields, the Sub-committee felt that essential information was lacking, and accordingly recommended that special studies or pilot projects be done to supply this information.

OTHER AREAS OF COUNCIL ACTIVITY

It will be noted that 1970 supplements to three annexes of the first report have not been issued – Physical Resources, Education of the Health Disciplines, and Health Research:

Physical Resources

In the original annex, the Committee reviewed the current situation and the related services in Ontario which affect physical resources; it highlighted some of the difficulties which exist with respect to the components of the present pattern and made certain recommendations. This completed Council action in this important area, at this stage.

Education of the Health Disciplines

Continued study has been carried out by the Committee. This has been directed primarily toward assessment of the educational requirements for the rehabilitation disciplines and a further report in the area of nursing education. These documents will be completed for presentation to Council in 1971.

Health Research

The Committee on Health Research has continued its work on the definition of the provincial role in health research. It has been devoting its attention particularly to such areas as the economics of health research; the co-ordination of health research programmes within the province, sponsored by both governmental and voluntary agencies; and the personnel support requirements needed to maintain

a viable health research programme. It is anticipated that these matters will be completed in 1971.

The Committee has continued to provide direct advice to the Province on applications for financial assistance, through its Sub-committees on Research Grants Review and Demonstration Models.

During 1970, the Council initiated activity and is developing reports in the following areas:

Audio Visual Systems

The Sub-committee on Audio Visual Systems began work in March, looking into provincial requirements for instructional media systems in the education of the health disciplines, health services, and public health education.

Perinatal Problems

The Sub-committee on Perinatal Problems was established in May to give consideration to problems surrounding birth and affecting either/or mother and infant, and developing proposals for improved health services in this area.

Environmental Quality

A primary Committee on Environmental Quality was set up in October to make recommendations to the government on all matters related to the quality of the human environment, with special consideration to the health and well-being of people.

Future Arrangements for Health Education

In November, Council approved the establishment of a task force to investigate the need for a new medical school/health sciences centre, giving due consideration to new approaches to health education. The relation of health education to health services and the effect of this on the community, not the projected manpower requirements alone, will provide the basis for the study.

Two other undertakings by Council should be noted:

Committee on the Healing Arts

A special request was made to Council in June to review the Report of the Committee on the Healing Arts. A review group was established and it reported to Council in November. It proposed certain basic principles related to the regulation and education of the health disciplines and these, as approved by Council, were submitted to the Minister of Health.

Conference on Co-operation in the Provision of Health Services

In April, Council took an active part in a Conference on Co-operation in the Provision of Health Services, sponsored by provincial bodies representing the various health disciplines, consumers, and the Department of Health. In the public interest, it is Council's policy to consult freely with representatives of health professions, related organizations, and others who share the common bond of seeking the best possible health services for the people of Ontario. This process also occurs as part of the work of the committees of Council.

MEMBERS OF COMMITTEE ON HEALTH CARE DELIVERY SYSTEMS

Dr. K. C. Charron, Chairman	Deputy Minister of Health
Miss C. Aikin	Dean, School of Nursing, The University of Western Ontario
Mr. R. Auld	Executive Director, Ontario Society for Crippled Children
Dr. E. H. Botterell	Dean, Faculty of Medicine, Queen's University
Dr. Carol Buck	Professor and Chairman, Department of Community Medicine, The University of Western Ontario
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Dr. T. L. Jones	Ontario Veterinary College, University of Guelph
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Mr. G. W. Phelps	Orillia. Formerly President, Ontario Hospital Association
Mr. F. A. Wilson	Vice-President, Parke and Parke Limited

MEMBERS OF THE SUB-COMMITTEE ON DENTAL CARE SERVICES

A. B. Hord, D.D.S., D.Sc.D., Chairman	Associate Professor of Restorative Dentistry, Faculty of Dentistry, University of Toronto
D. W. Lewis, D.D.S., M.Sc.D., D.D.P.H.	Associate Professor and Chairman, Department of Dental Public Health, Faculty of Dentistry, University of Toronto
Norman F. Anderson, D.D.S.	Sarnia
G. W. Burgman, D.D.S.	Kirkland Lake
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Mrs. Patricia M. Johnson	President, Canadian Dental Hygienists' Association
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ACKNOWLEDGEMENTS

Technical support in the preparation of this report was provided through the auspices of the Research and Planning Branch of the Ontario Department of Health. Under Dr. G. W. Reid, Director, the following staff members worked with the Sub-committee:

Dr. W. D. Wigle	Research and Planning Officer (Medical)
Dr. M. Shackleton	Assistant Research and Planning Officer (Medical)

Additional technical support was received from:

Dr. R. E. Feasby	Senior Consultant in Public Health Dentistry, Local Health Services Branch, Ontario Department of Health

Special presentations were given by:

Dr. W. C. Deacon	Member of the Board of Governors, Ontario Dental Association
Dr. Roger Ellis	Research Associate, Department of Dental Public Health, University of Toronto
Dr. A. Murray Hunt	Chairman, Graduate Studies, School of Dentistry, University of Toronto

Recommendations

RECOMMENDATIONS
Supplement No. 8
HEALTH CARE DELIVERY SYSTEMS
DENTAL CARE SERVICES

COUNCIL ACTION

The Ontario Council of Health has approved the recommendations of the June 1970 report of the Sub-committee on Dental Care Services, except where indicated otherwise by footnote.

RECOMMENDATIONS

1. THAT fluoridation of water be made mandatory for all municipalities with central water supplies, to attain the optimum of one part of fluoride per million parts of water.

2. THAT the application of topical fluoride to the teeth of all children, at recommended intervals beginning at age three, be a responsibility of the Dental Public Health Service and that priority be given to areas where there has been insufficient fluoride in the drinking water.

3. THAT the dental health education programmes recommended by the Ontario Department of Health be expanded to cover residents in all the health units in the province, especially as a part of the health education curriculum in Ontario schools.

4. THAT information designed to motivate citizens to improve their dental health be propagated, using the media of press, radio, television, and other appropriate communications media.

5. THAT adequate courses of instruction in dental health education be an integral part of the training for health sciences personnel.

6. THAT substantial funds be made immediately available for the expansion of health research in dentistry.

7. THAT it is urgent that the Recommendation 8 of the

Committee on Education of the Health Disciplines – that planning commence immediately for the establishment of a third dental school in Ontario – be implemented in one of the health sciences centres with a programme designed initially to graduate dental practitioners.*

8. THAT planning be initiated immediately for the establishment of dental schools in all the health sciences centres.**

9. THAT a period of mandatory clinical experience in a practice situation (for example, hospital, public health unit, private practice) approved by the Royal College of Dental Surgeons, under the supervision and presence of a licensed dentist in good standing, be a requirement of all dental students before receiving a licence to practise dentistry in Ontario.***

10. THAT adequate financial support be given in order that postgraduate courses to train dental teachers, specialists, and researchers, be established or expanded.

11. THAT it is urgent that facilities be made available to train graduate dentists in the efficient use of auxiliary personnel.

12. THAT the practice of dental hygiene include all of the functions of the practice of dentistry and dental surgery, except the following functions:

    (a) Diagnosis or treatment planning for the prevention, alleviation, or correction of any disease, pain, deficiency, deformity, defect, lesion, disorder, or physical condition of, in, or from any human tooth, jaw, or associated structure or tissue, or any injury thereto.

    (b) Prescribing the use of any prosthetic denture, bridge, or any other oral prosthetic appliance.

* The Ontario Council of Health received Recommendation 7 but deferred debate to a future meeting when more information is available.

** The Ontario Council of Health received Recommendation 8 but deferred debate to a future meeting when more information is available.

*** The Ontario Council of Health did not approve Recommendation 9 but suggested that the question of a period of mandatory clinical experience be referred to the Royal College of Dental Surgeons, and the two dental schools, with a request for an appropriate opinion.

(c) Providing facilities for the taking or making of any impression, bite, cast, or design preparatory to, or for the purpose of, or with a view to the making, producing, reproducing, constructing, fitting, furnishing, supplying, altering, or repairing of any such prosthetic denture, bridge, or other oral prosthetic appliance.

(d) Severing or cutting hard or soft tissue.

(e) Prescribing or administering drugs.*

13. THAT programmes be provided for the retraining of the present hygienist to the level of the proposed dental hygienist with additional training.*

14. THAT the *Ontario Dentistry Act* be amended so that a dentist in private practice may employ more than one dental hygienist.*

15. THAT the Education Committee give further consideration to the establishment of diploma courses for dental hygienists at colleges of applied arts and technology affiliated with health sciences complexes, provided these institutions are able to provide and/or arrange for the requisite instruction in basic sciences, adequate and properly supervised clinical experience, as well as being able to meet approved standards for accreditation.

16. THAT Recommendation 15 of the Committee on Education of the Health Disciplines – that there is a need for some dental hygienists to be educated to the degree level for positions in teaching and in senior administration – be implemented. The successful completion of the dental hygiene diploma courses should be credited to the degree course without loss of time.

17. THAT a continuing education programme be made available for dental hygienists and that all hygienists be encouraged to avail themselves of such programmes regularly. Retired hygienists who wish to work again should be encouraged to undertake a short refresher course under the above programme.

18. THAT the recommendation (10) of the Committee on Education of the Health Disciplines – that present educational programmes

* The Ontario Council of Health was not prepared to accept the details in Recommendations 12, 13, and 14, but endorsed the principle that dental hygienists have an expanded role.

in dental assisting within secondary schools should continue to be offered and that, where there is a demonstrable local need, consideration should be given to establishing further courses in dental assisting at the secondary school level – be implemented.

19. THAT the recommendation (11) of the Committee on Education of the Health Disciplines – that one-year post grade XII courses in dental assisting should be established in colleges of applied arts and technology, where there is a demonstrated need for such courses, where the community colleges can develop the resources, and where these courses would not jeopardize any other programme which may be established at the secondary school level – be implemented.

20. THAT the duties of a dental assistant, who has successfully completed an approved course for a licence in dental assisting, be expanded to include all those duties performed by a present-day dental hygienist (e.g., fluoride applications and exposure of radiographs) except the scaling of teeth; that the duties must be performed under the supervision of a licensed dentist and that the Dentistry Act be amended accordingly.*

21. THAT a study be undertaken, sponsored by the Ontario Department of Health with the assistance of the Royal College of Dental Surgeons and the Governing Board of Dental Technicians, to determine methods of training dental technicians in intra-oral procedures for the construction of removable prosthetic appliances so that these technicians may assume the role of clinical technicians. This technician with clinical training would work with the other members of the dental team under the supervision of, and responsible to, the dentist.*

22. THAT a dental health plan be instituted and, as a first step, provide coverage for prophylaxis (i.e., cleaning of teeth by dentists or dental hygienists), restorations (i.e., fillings), radiographs, extractions and interceptive orthondontics (i.e., measures taken to prevent malposition of teeth and malfunction of the jaws); that this plan be initially for children from birth to the fourth birthday; that a succeeding single age group be added as soon as resources become available, so that eventually all citizens of Ontario would be included.

* The Ontario Council of Health did not accept the details in Recommendations 20 and 21 but endorsed the principles expressed.

23. THAT dental services consisting of examination, bite-wing radiographs, extractions, synthetic porcelain, resin or silver amalgam restorations, pulp protection and temporary crown for traumatized permanent anterior teeth, be provided to those citizens of Ontario in marginal income groups similar to those presently eligible for premium assistance under the Ontario Health Services Insurance Plan, and that these services be provided by a hospital out-patient department, or a public health dental clinic, or a dentist in private practice.

24. THAT, in underserviced areas of the province, the present dental treatment services provided by the Department of Health be extended, by means of teams of dentists and auxiliaries using mobile and fixed equipment, to provide services for citizens, priority being given to children, social assistance recipients, and marginal income groups.

25. THAT at provincial level a dental health branch be established with a director to be responsible for both preventive and treatment dental services programmes.

26. THAT, in Southern Ontario, five regional dental care centres be established in association with the five health sciences centres, and each with in-patient and out-patient clinic facilities in an affiliated hospital to provide specialized dental services in that region.

27. THAT, in Northern Ontario, regional dental care centres be established in association with a university centre in a suitably designated large city (e.g., Thunder Bay, Sudbury) and each with in-patient facilities and clinic facilities in an affiliated hospital to provide specialized dental services in that region.

28. THAT dental care services be provided in any community health care centre when such centres are established.

29. THAT a pilot course be established immediately to provide a selected group of hygienists and assistants with the proposed additional training.

30. THAT a committee, made up of representatives from appropriate dental organizations, the Faculties of Dentistry of Ontario, the public, and government, be set up by the Ontario Department of Health to evaluate dental programmes and to co-ordinate and

encourage research in such matters as dental care delivery systems and dental disease prevention.*

31. THAT demonstration models be organized without delay to provide information relative to:

    (a) Productivity, efficiency, and cost-effectiveness of the "team approach" to dental service;

    (b) Evaluation of private solo and group practice systems;

    (c) Cost-effectiveness comparison between publicly owned and operated clinics and private group practice systems;

    (d) Cost-effectiveness of programmes involving dentist remuneration by salary, sessions or other method, and fee for service;

    (e) The most effective methods of providing efficient quality service to citizens residing in underserviced areas of the province;

    (f) An evaluation of the dental plan (Recommendation 22) previously recommended.

* The Ontario Council of Health referred Recommendation 30 to its Executive Committee with regard to recommending mechanisms of implementation.

Report of the Sub-committee on Dental Care Services

SECTION I

Introduction

TERMS OF REFERENCE

The Sub-committee on Dental Care Services was set up as one of the sub-committees established to support the Committee on Health Care Delivery Systems by studying and developing proposals related to systems for dental care delivery.

At the request of the members of the Sub-committee on Dental Care Services, Dr. K. C. Charron, Chairman, Ontario Council of Health, proposed the following guidelines for the consideration of that Sub-committee:

> *Taking into account the reports to Council on dental health matters and action following, to identify the proposed improved arrangements within the systems of delivering dental health services to the citizens of Ontario. The implementation of these arrangements should be considered first of all on the basis of demonstration projects.*

ORGANIZATION OF REPORT

The report consists of three parts:

1. **Introduction** – describes the Sub-committee's task and the method of investigation and reporting.

2. **Comments and Recommendations** – lists the main findings and

recommendations of the Sub-committee under appropriate headings.

3. **Appendices**

A. – Glossary of words and terms used in the report.

B. – Bibliography of material which led the Committee to the conclusions and recommendations which are submitted.

METHOD OF COMMITTEE INVESTIGATION

In approaching its task, the Sub-committee sought the advice of Council resource personnel for a definition of function and objectives. In the submission of an interim report to Council in October of 1969, it became evident that there were areas of concern to both Council and the Sub-committee which required clarification.

In this interim report the Sub-committee stated:

Since dental caries, malocclusion, and periodontal disease ultimately affect all citizens of Ontario, dentistry is therefore an integral and necessary part of any health service. And since the people of the Province of Ontario are to receive health care, administered and subsidized by the state, it is necessary that preventive and treatment dental health services be part of this service.

The Sub-committee formulated its recommendations presented in this report as a result of the following procedures:

- a thorough search of the literature pertaining to dental care.
- a review of the reports of the committees of the Ontario Council of Health as they related to dental care.
- a study of the submissions of the dental and allied professions to the Ontario Council of Health and other government advisory bodies, both provincial and federal.
- a consideration of information and opinions from university personnel and representatives from dental and allied professional bodies knowledgeable in the fields under discussion.

- an appraisal of any documents relevant to dental care, e.g., Task Force Report on Health Care Costs in Canada, 1969.

- a discussion on any papers specially prepared by individual members of the Sub-committee at the request of the latter on a particular aspect of dental care.

SPECIFIC AREAS OF CONSIDERATION

Early in its deliberation, the Sub-committee identified the main topics to be considered in order to obtain its objectives to be as follows:

1. **Preventive Dentistry**

    i. Fluoridation
    ii. Dental Health Education
    iii. Research into the Prevention of Dental Disease

2. **Education of Dental Personnel**

    i. Dentists
    ii. Dental Hygienists
    iii. Dental Assistants
    iv. Dental Technicians

3. **Organization of Dental Care Services**

    i. Dental Care Plan
    ii. Regional Organization

4. **Suggested Demonstration Models**

SECTION II

Comments and Recommendations

1. PREVENTIVE DENTISTRY

i. Fluoridation

The Sub-committee concurs with the recommendations of the Ontario Council of Health* regarding fluoridation and considers that, since the value of mandatory fluoridation is significant and recognized, this should be the first consideration in any comprehensive dental programme. In addition, it is the unanimous opinion of the Sub-committee that without fluoridation other features of the proposed programme will not be economically feasible.

> *RECOMMENDATION 1*
> *THAT fluoridation of water be made mandatory for all municipalities with central water supplies, to attain the optimum of one part of fluoride per million parts of water.*

The topical application of fluoride was first reported by Knutson[1] in 1943 to reduce the incidence of dental caries (dental decay) by 40 per cent; since that time, various compounds of fluoride have been applied to teeth, in solution, in specially prepared dental pastes, as well as in dentifrices (toothpastes). Maximum caries

* A submission prepared for the Honourable the Minister of Health on the subject of Fluoridation by the Ontario Council of Health, June, 1967.

[1] Superior figures refer to the Bibliography of Appendix B.

reduction is achieved when application of fluoride to teeth is combined with the use of a fluoride dentifrice and the consumption of fluoridated water. Dental personnel, both in private and public health practice, have applied fluoride topically to the teeth of increasing numbers of children since 1943.

Stannous fluoride and acidulated phosphate fluoride are the fluoride compounds most frequently used at the present time. Topical application of fluoride should be started at age three and repeated at least annually until age eighteen when the full complement of teeth have erupted. Since 1968,[2] Muhler and his associates have reported significant reduction in the rate of dental caries by a programme in which specially prepared dental fluoride paste is self-applied under supervision. The number of children who can have this method applied per year by one dentist or dental auxiliary is, therefore, approximately nine times that when fluoride is provided on an individual basis; for this reason it is the method of choice for children receiving application of fluoride to their teeth through the public health service.

RECOMMENDATION 2
THAT the application of topical fluoride to the teeth of all children, at recommended intervals beginning at age three, be a responsibility of the Dental Public Health Service and that priority be given to areas where there has been insufficient fluoride in the drinking water.

ii. Dental Health Education

Effective dental health education is achieved through the co-ordinated effort of public health agencies, the Department of Education, and the dental profession. Public health units direct dental health education programmes for pre-school and school children, stimulate continuing activity by teachers and parents, assist the dental profession with resource material, and employ the mass media to reach the general public. The basic features of dental health education programmes include: instruction in oral hygiene, advice on nutrition, description of the anatomy and function of the teeth and their adjacent structures, explanation of dental diseases, and intensive motivation for the use of preventive measures as well as regular treatment.

Thorough dental health education to school children in Ontario

has been shown by Lewis, Mitton and Grainger[3] to lead to improved oral hygiene and reduction in the prevalence of gingival disease. The Sub-committee is in unanimous agreement that health education is essential for the prevention of dental disease.

RECOMMENDATION 3
THAT the dental health education programmes recommended by the Ontario Department of Health[4] be expanded to cover residents in all the health units in the province, especially as a part of the health education curriculum in Ontario schools.

RECOMMENDATION 4
THAT information designed to motivate citizens to improve their dental health be propagated, using the media of press, radio, television, and other appropriate communications media.

The Sub-committee feels that the nurse (degree, diploma and assistant) can contribute to the prevention of dental disease in professional contact with the public.[5] It is, therefore, highly desirable that an adequate and standard course in dental disease prevention be given in all educational institutions in the province which train nurses.

RECOMMENDATION 5
THAT adequate courses of instruction in dental health education be an integral part of the training for health sciences personnel.

iii. Research into the Prevention of Dental Disease

The Sub-committee considers that, due to recent and anticipated future developments in dental disease prevention (e.g., self-applied topical fluoride and preventive cements for fissure decay), there is need to support research in new preventive dental measures. Accordingly, the Sub-committee heartily endorses Recommendation 37 approved by Council and contained in the Report of the Ontario Council of Health on Health Research, Annex "F", October 1969. For emphasis, this recommendation is repeated here:

37. THAT, because of the importance of prevention in dental care and the need for research in this area, substantial funds be made available for the development of health research in dentistry.

RECOMMENDATION 6
THAT substantial funds be made immediately available for the expansion of health research in dentistry.

2. EDUCATION OF DENTAL PERSONNEL

i. Dentists

The two dental faculties in Ontario are equipped to graduate annually 175 dental practitioners (dentists) at the present time. Much discussion and reporting has transpired in respect to dentist population ratios, distribution of dentists, socio-economic factors, need and demand for dental service. The Sub-committee is convinced that maldistribution of dentists in the province is indeed a fact and that other proposals and recommendations, if implemented, will necessitate the training of more dentists to treat the people of Ontario, especially in rural and outlying areas. The dental profession, through its organization, the Ontario Dental Association, is in agreement with the Manpower Committee in respect to the future need for dentists and training facilities. The committee, therefore, feels that it would be advisable to provide additional facilities in another health sciences centre, since both physical facilities and availability of part-time clinical staff for any expansion programme in the two existing dental faculties would prove impractical if not impossible. For example, the facilities at the University of Toronto Dental Faculty are presently taxed to the limit and it would be impractical to attempt to increase enrolment or stagger classes in order to graduate more dentists with existing facilities and staff.[6]

RECOMMENDATION 7
*THAT it is urgent that Recommendation 8 of the Committee on Education of the Health Disciplines – that planning commence immediately for the establishment of a third dental school in Ontario – be implemented in one of the health sciences centres with a programme designed initially to graduate dental practitioners.**

* The Ontario Council of Health received Recommendation 7 but deferred debate to a future meeting when more information is available.

RECOMMENDATION 8
*THAT planning be initiated immediately for the establishment of dental schools in all the health sciences centres.**

It is the unanimous opinion of the committee that the newly graduated dentist, while knowledgeable in all areas of the general practice of dentistry and clinically competent to treat patients, lacks experience in the efficient conduct of dental practice, whether private or in the public health area. To quote Dean W. J. Dunn:

> "Of all the major professions it is only dentistry which expects its graduates 'to be off and running' the day they receive their university degrees. Not only are these graduates expected to be able to perform a wide range of treatment services but there is an expectation that they have a rather comprehensive appreciation of effective and efficient practice administration including the utilization of auxiliary personnel. It is time that the profession recognizes that the modern dental school, if it is to give appropriate attention to basic sciences and to the theoretical aspect of clinical sciences, cannot hope to produce graduates sufficiently competent to engage in immediate independent practice."[7]

The growing number of new graduates who choose to associate in practice with an experienced practitioner would substantiate this fact.[8] It would be in the interest of both the public and government if compulsory internship became a requirement of each graduate since the end results would be increased efficiency and earlier maximum productivity.

RECOMMENDATION 9
*THAT a period of mandatory clinical experience in a practice situation (for example, hospital, public health unit, private practice) approved by the Royal College of Dental Surgeons, under the supervision and presence of a licensed dentist in good standing, be a requirement of all dental students before receiving a licence to practise dentistry in Ontario.***

* The Ontario Council of Health received Recommendation 8 but deferred debate to a future meeting when more information is available.

** The Ontario Council of Health did not approve Recommendation 9.

The statement of the Manpower Committee,* that dental teachers of the calibre required to staff dental faculties are in short supply, was noted by the Sub-committee and also the fact that the dental profession is in agreement with this.**

If the other proposals of this report are to be significant and implemented, the need for more specialists and research orientated dentists will be an early requirement.

RECOMMENDATION 10
THAT adequate financial support be given in order that postgraduate courses to train dental teachers, specialists, and researchers, be established or expanded.

The Sub-committee recognizes the value of auxiliary personnel in increasing the productivity of the dentist; auxiliary personnel includes the chairside assistant, the dental hygienist, the dental assistant, the secretary, and the office manager.

There is ample evidence that the dentist utilizing dental auxiliaries is capable of increased output in dental service in any given period of time. In addition, a study and follow-up by Purdy[9] suggests that graduates who have been exposed to this facility as undergraduates are indeed employing dental auxiliaries in their dental practices.

Consideration must therefore be given to providing adequate training facilities to graduate dentists wishing to increase their productivity by utilizing dental auxiliaries.

RECOMMENDATION 11
THAT it is urgent that facilities be made available to train graduate dentists in the efficient use of auxiliary personnel.

ii. Dental Hygienists

It was noted by the Sub-committee that the Committee on Manpower, in a report to the Ontario Council of Health in June

* Report of the Manpower Committee to the Ontario Council of Health on Dental Manpower, June 1968.

** A Joint Submission to the Ontario Council of Health from the Ontario Dental Association and the Royal College of Dental Surgeons, October, 1968.

1968, suggested the creation of two new types of dental auxiliaries, a dental therapist and a dental associate.

The Sub-committee gave considerable thought to these suggestions and agrees that the duties of the dental hygienists should be expanded. Further training for the dental hygienist could be assimilated into the present two-year curriculum and it would produce an auxiliary well educated to provide further clinical treatment while maintaining the essential emphasis on preventive dentistry, treatment, and counselling. However, it was felt that to change the title of this auxiliary would only prove confusing and unnecessary.

It is recognized that this hygienist with advanced training should work with the aid of a dental assistant, in order to ensure maximum utilization of services.[10]

The Sub-committee also feels that, in order that the present dental hygienist will not be lost from the work force, a course will be required to provide the additional training.

It is most important that dentists be encouraged to employ a dental hygienist. A utilization programme should be made available to inform dentists and dental students regarding the maximum utilization of dental hygienists with advanced training, as well as other auxiliaries. (See Recommendation 11.)

The present *Ontario Dentistry Act* permits a dentist in private practice to employ only one dental hygienist. In view of the dental manpower situation, the Sub-committee considers that the Act should be amended to permit the increased employment of dental hygienists, and also to provide for the expansion of duties of the dental hygienist.

The Sub-committee does not recognize a need for a dental associate.[11,12] It feels that, at this time, in the absence of completed studies utilizing hygienists in the expanded role, all treatment procedures which involve the cutting of hard or soft tissue should be performed by a licensed dentist.

However, it is felt that further evaluation of this is required. Since the Sub-committee believes unanimously that priority should be given to preventive rather than treatment service, until further study has been done, the need for the dental associate is

questionable. The Sub-committee noted that the *Dental Act* in Nova Scotia[13] was amended in 1966 to expand the duties performed by a dental hygienist and is in full agreement with this amendment.

RECOMMENDATION 12
THAT the practice of dental hygiene include all of the functions of the practice of dentistry and dental surgery, except the following functions:

a. *Diagnosis or treatment planning for the prevention, alleviation, or correction of any disease, pain, deficiency, deformity, defect, lesion, disorder, or physical condition of, in, or from any human tooth, jaw, or associated structure or tissue, or any injury thereto.*

b. *Prescribing the use of any prosthetic denture, bridge, or any other oral prosthetic appliance.*

c. *Providing facilities for the taking or making of any impression, bite, cast, or design preparatory to, or for the purpose of, or with a view to the making, producing, reproducing, constructing, fitting, furnishing, supplying, altering, or repairing of any such prosthetic denture, bridge, or other oral prosthetic appliance.*

d. *Severing or cutting hard or soft tissue.*

e. *Prescribing or administering drugs.* *

RECOMMENDATION 13
THAT programmes be provided for the retraining of the present hygienist to the level of the proposed dental hygienist with additional training. *

RECOMMENDATION 14
THAT the Ontario Dentistry Act *be amended so that a dentist in private practice may employ more than one dental hygienist.* *

* The Ontario Council of Health was not prepared to accept the details in Recommendations 12, 13, and 14 but endorsed the principle that dental hygienists have an expanded role.

The Sub-committee noted that the Committee on Education of the Health Disciplines, in the Interim Report of June 1968, recommended that, in addition to maintaining diploma level courses in dental hygiene at university dental schools, consideration be given to mounting diploma courses in dental hygiene at colleges of applied arts and technology that meet prescribed standards. It further recommended that a degree programme for dental hygienists be initiated to provide academic teachers of dental auxiliaries and administrators. Regardless of the institution sponsoring the course, curriculum for the diploma programme should be given as a college level course of study. The diploma in dental hygiene should be acceptable as credit toward a degree for dental hygiene.

It was noted that, in Ontario, there are no refresher courses for dental hygienists and the Sub-committee feels that, in view of the present day advancement in dental procedures, it should be recommended that every dental hygienist participate in a continuing education programme, including short refresher courses, periodically.

RECOMMENDATION 15
THAT the Education Committee give further consideration to the establishment of diploma courses for dental hygienists at colleges of applied arts and technology affiliated with health sciences complexes, provided these institutions are able to provide and/or arrange for the requisite instruction in basic sciences, adequate and properly supervised clinical experience, as well as being able to meet approved standards for accreditation.

RECOMMENDATION 16
THAT Recommendation 15 of the Committee on Education of the Health Disciplines – that there is a need for some dental hygienists to be educated to the degree level for positions in teaching and in senior administration – be implemented. The successful completion of the dental hygiene diploma courses should be credited to the degree course without loss of time.

RECOMMENDATION 17
THAT a continuing education programme be made available for dental hygienists and that all hygienists be encouraged to avail themselves of such programmes

regularly. Retired hygienists who wish to work again should be encouraged to undertake a short refresher course under the above programme.

iii. **Dental Assistant**

The dental assistant is a very essential member of the dental team. It is a proven fact that the utilization of dental assistants can increase the productivity of the dental office. This utilization in practice varies considerably; a dental assistant is required to perform as receptionist-secretary-bookkeeper and chairside assistant. In addition, she is responsible for the processing and mounting of radiographs, minor laboratory work, and instrument sterilization. The value of a well-trained dental assistant in the practice of "four-handed" dentistry is one of the greatest contributions of this auxiliary.

The current trend to upgrade and to provide formal educational programmes for dental assistants is to be encouraged. There are several secondary schools in the Toronto area and one in Hamilton which offer courses in dental assisting as part of the school curriculum through Grade XI and XII. The College of Applied Arts and Technology in Windsor offers a one-year programme in dental assisting, and several other colleges are considering offering this course. In addition, the Royal College of Dental Surgeons also runs an evening course in dental assisting for 90 students.

The Sub-committee considers that suitably educated dental assistants could assume some intra-oral functions, e.g., prophylaxis, fluoride applications, and exposure of radiographs, which, under the present *Ontario Dentistry Act*, are not permitted. In addition, the dental assistant could prove useful in the provision of dental health education, and hence any training programme should provide an adequate preparatory course qualifying the candidate for a licence in dental assisting.

The possible increase in the number of dental assistants employed by a dentist again accentuates the importance of auxiliary utilization programmes as outlined in Recommendation 11. The Sub-committee noted the recommendations of the Committee on Education of the Health Disciplines in its Interim Report to Council, June 1968, regarding dental assistants, with which it concurs.

RECOMMENDATION 18
THAT the recommendation (10) of the Committee on Education of the Health Disciplines – that present educational programmes in dental assisting within secondary schools should continue to be offered and that, where there is a demonstrable local need, consideration should be given to establishing further courses in dental assisting at the secondary school level – be implemented.

RECOMMENDATION 19
THAT the recommendation (11) of the Committee on Education of the Health Disciplines – that one-year post grade XII courses in dental assisting should be established in colleges of applied arts and technology, where there is a demonstrated need for such courses, where the community colleges can develop the resources, and where these courses would not jeopardize any other programme which may be established at the secondary school level – be implemented.

RECOMMENDATION 20
THAT the duties of a dental assistant, who has successfully completed an approved course for a licence in dental assisting, be expanded to include all those duties performed by a present-day dental hygienist (e.g., fluoride applications and exposure of radiographs) except the scaling of teeth; that the duties must be performed under the supervision of a licensed dentist and that the Dentistry Act *be amended accordingly.**

iv. Dental Technicians

The dental technician has, in recent years, become oriented to the commercial dental laboratories where he constructs dental prostheses on prescription for the dental profession. Although some technicians still work in dental offices, most are somewhat remote from the dental "team."[14] It is the opinion of the committee that a properly trained clinical technician, working in close association with a dentist, might provide quality prosthetic denture services to public

* The Ontario Council of Health did not accept the details in Recommendation 20 but endorsed the principles expressed.

health with reasonable costs and adequate safeguards of health standards, particularly in private and public group-type practices where maximum efficiency could be achieved. The clinical technician would likely attain earnings and status comparable to highly trained technicians working in the medical field.

The Sub-committee agreed with Recommendation 12 of the Committee on Education of the Health Disciplines which stated that no additional educational programmes for dental technicians be established at this time.

> *RECOMMENDATION 21*
> *THAT a study be undertaken, sponsored by the Ontario Department of Health with the assistance of the Royal College of Dental Surgeons and the Governing Board of Dental Technicians, to determine methods of training dental technicians in intra-oral procedures for the construction of removable prosthetic appliances so that these technicians may assume the role of clinical technicians. This technician with clinical training would work with the other members of the dental team under the supervision of, and responsible to, the dentist.**

3. ORGANIZATION OF DENTAL CARE SERVICES

i. Dental Care Plan

In the initial deliberation of the Sub-committee, it was accepted that the most efficient provision of dental health care required the expansion of existing services in both the preventive and treatment areas in a balanced and orderly manner.

Dr. A. M. Hunt discussed with the Sub-committee the institution of a system of dental treatment for children in school dental clinics throughout the province.

* The Ontario Council of Health did not accept the details in Recommendation 21 but endorsed the principles expressed.

There are, at present, eight municipalities* supplying treatment for some children in clinics located in schools, which are staffed by full- and part-time personnel.

There is evidence to show that utilization of dental service is increased when an adequate treatment service is available in school clinics. This is particularly apparent in the children of families with marginal incomes. Dr. Hunt discussed the value of allowing the parents to choose between the services of a private practitioner and those offered in school dental clinics. For families where both parents are at work there is an obvious advantage in having dental treatment available within the schools.

There are certain disadvantages inherent in a dual system for the delivery of dental services. Children moving from private practitioners to school clinicians are not likely to receive a continuity of service. A part-time school clinician must leave his private office vacant when attending a school clinic. This is an inefficient method of establishing and maintaining dental operating units.

There are approximately 80 communities in Northern Ontario which are not large enough to require the services of a resident dentist. To serve these places, the Department of Health operates two railway dental cars and the Ontario Red Cross has three mobile dental coaches. At the present time, only children living in these communities receive dental care from mobile units, with the exception of emergency services for adults. The Sub-committee has also considered the plan developed by the Ontario Dental Association for dental health care for children. Dr. W. C. Deacon, Member of Board of Governors, Ontario Dental Association, Ottawa, appeared before the Sub-committee to discuss the Association's Dental Health Plan for Children, which has been considered in detail.

A summary of the features of this plan follows:

– The Plan proposes that dental treatment for children be provided for children in the offices of private practitioners except in remote areas where these do not exist. In these underserviced areas, the utilization of salaried dentists operating from mobile units is suggested.

* Hamilton-Wentworth County Health Unit, Toronto Department of Public Health, Ottawa-Carleton-Eastview District Health Unit, Waterloo County Health Unit, York Borough, York East, York North, and London.

– The Plan is for incremental dental care beginning with children aged three and adding a new age group each year until all children up to 18 would be entitled to service under the plan. Dental treatment consisting of prophylaxis, topical fluoride applications, radiographs, fillings and extractions would be provided on a fee for each unit of service. The fees would be according to the current fee schedule of the Ontario Dental Association and would be paid to the private dental practitioner through a dental service corporation.

The Sub-committee considered the advantages and disadvantages of a dual system for the delivery of services and concluded that it is desirable to investigate the feasibility of extension of both systems in the province.

RECOMMENDATION 22
THAT a dental health plan be instituted and, as a first step, provide coverage for prophylaxis (i.e., cleaning of teeth by dentists or dental hygienists), restorations (i.e., fillings), radiographs, extractions and interceptive orthodontics (i.e., measures taken to prevent malposition of teeth and malfunction of the jaws); that this plan be initially for children from birth to the fourth birthday; that a succeeding single age group be added as soon as resources become available, so that eventually all citizens of Ontario would be included.

The Royal Commission on Health Services, 1964, regarding dental services for welfare recipients, stated that a number of provinces have met the problem of dental need for welfare recipients by introducing a dental welfare service programme; the recipient is entitled to services (including, where necessary, the provision of dentures) from a hospital out-patient department or public health dental clinic or a dentist in private practice at either no cost or only part of the normal fee.

According to information received from the Social Planning Council of Metropolitan Toronto,[15] under the *General Welfare Assistance Act* and Regulations (Ontario, 1967), provision is made whereby municipalities may provide dental services for recipients of general welfare assistance; half of the expense incurred by the municipality is paid by federal government funds under the *Canadian Assistance Act* but the type of dental service provided is

left to the municipality.

The Sub-committee considers this variation in provision of dental services to welfare recipients in the province undesirable and feels that any services should be available to all Ontario citizens regardless of where they live.

There is a Dental Welfare Plan[16] at present, administered by the Ontario Dental Association, which covers only beneficiaries of mother's allowance and dependent fathers and provides the following services: examination and bite-wing radiographs (cavity detection x-rays), extractions, synthetic porcelain or silver amalgam restorations (fillings), prophylaxis, pulp (nerve) protection, and temporary crown for traumatized permanent anterior teeth.

The Sub-committee noted that full or partial premium assistance is given by the Ontario Health Services Insurance Plan for marginal income groups and it considers that these are the people who should be provided with subsidized dental services.

RECOMMENDATION 23
THAT dental services consisting of examination, bite-wing radiographs, extractions, synthetic porcelain, resin or silver amalgam restorations, pulp protection and temporary crown for traumatized permanent anterior teeth, be provided to those citizens of Ontario in marginal income groups similar to those presently eligible for premium assistance under the Ontario Health Services Insurance Plan, and that these services be provided by a hospital outpatient department, or a public health dental clinic, or a dentist in private practice.

RECOMMENDATION 24
THAT, in underserviced areas of the province, the present dental treatment services provided by the Department of Health be extended, by means of teams of dentists and auxiliaries using mobile and fixed equipment, to provide services for citizens, priority being given to children, social assistance recipients, and marginal income groups.

ii. **Regional Organization**

The Sub-committee concurs with the summary of Recommendations in the Report of the Task Force on Dental Public Health Services,[17] 1967, regarding the establishment of a dental health branch with a director-in-charge to be responsible at the provincial level for the preventive dental health programme and the dental services programme.

RECOMMENDATION 25
THAT at provincial level a dental health branch be established with a director to be responsible for both preventive and treatment dental services programmes.

In order that specialized dental services may be provided in an overall manner throughout Ontario, the Sub-committee feels that regional dental care centres should be established. In Southern Ontario these would be in association with the five health sciences centres and in Northern Ontario in association with a university centre in a suitably designated large city (e.g., Thunder Bay, Sudbury). Each regional dental care centre is envisaged as consisting of a dental ward and out-patient clinic facilities in the hospital affiliated with the health sciences or university centre and would be under the direction of a chief of dentistry assisted by appropriate staff.

RECOMMENDATION 26
THAT, in Southern Ontario, five regional dental care centres be established in association with the five health sciences centres, and each with in-patient and out-patient clinic facilities in an affiliated hospital to provide specialized dental services in that region.

RECOMMENDATION 27
THAT, in Northern Ontario, regional dental care centres be established in association with a university centre in a suitably designated large city (e.g., Thunder Bay, Sudbury) and each with in-patient facilities and clinic facilities in an affiliated hospital to provide specialized dental services in that region.

The Sub-committee also noted that the Committee on Physical Resources recommended in their Report to Council that community health care centres should be developed to provide diagnostic and

treatment services (Recommendation 46b) and the Sub-committee considers that dental care services should be an integral part of any such centre.

> *RECOMMENDATION 28*
> *THAT dental care services be provided in any community health care centre when such centres are established.*

4. SUGGESTED DEMONSTRATION MODELS

While the Sub-committee is confident that the expansion of duties of dental auxiliaries, as suggested previously in this report, is feasible and necessary to bring about improved delivery of dental care, it nevertheless noted with interest the following statement from the December 1969 Manual of the Council on Dental Education of the American Dental Association.[18]

> "As of the present time, there has been no research on how a dental hygienist or dental assistant with extended responsibilities might be used most efficiently and economically in private practice. The institutional research projects already completed demonstrate that the carefully selected and specially trained auxiliary can increase the amount of dental care rendered by an individual dentist while maintaining the quality of that care. It is only conjectural, however, that the results of these institutional experiments will be applicable to the average private practice. The questions of efficiency and economy become even more pointed when one realizes that the scope of responsibilities now being considered for assignment to the dental assistant or dental hygienist is relatively narrow – that is, the placement of restorative materials, placement of rubber dams and making of study model impressions."

Thus, although numerous studies in university, government and armed forces clinics document increases in dental care productivity without loss of quality, the total benefits (in a cost-effectiveness sense) of using auxiliaries with expanded duties in private dental offices cannot be stated with high accuracy at this time. One study in Prince Edward Island using dental hygienists with expanded duties in private practice is now underway. Early initial estimates of improved

productivity are highly favourable but these have not been achieved without some minor complications.[19] It would be desirable to obtain information particularly applicable to the current requirements of Ontario.

For these reasons, the Sub-committee feels that a demonstration project employing a selected group of upgraded hygienists and upgraded assistants, under the supervision of a dentist, all of whom have undergone a special training programme designed for this project, be commenced immediately. The team approach to dental health care can be studied in the environment of private solo practice, private group practice, dental public health clinics, school dental programmes, hospital out-patient departments, and other existing facilities for delivery of preventive and treatment services. These model demonstration studies are desirable in various geographic areas. They should function to provide both essential cost-benefit information and service to the selected areas. The various studies should be designed to permit subsequent comparisons of productivity, quality of care, and efficiency of delivery, and to preserve the principles of patient diagnosis and treatment planning and continuing patient care by the dentist.

Another area requiring further information through demonstration models would be a study relative to remuneration of the dentist by salary, per capita grant, or fee for service.

Much discussion with respect to demand for services, socio-economic factors, geographic areas and population density statistics peculiar to the province of Ontario, makes it necessary for demonstration models to be established for provision of high quality service at reasonable cost by the most efficient means in the areas of the province which have proven to be unattractive to dental practitioners.

Because of a lack of essential information relative to the Province of Ontario, the Sub-committee does not support Recommendation 31 of the Health Manpower Report to Council which states:

> "in order to ensure initial staffing, an experimental course for the training of dental associates be started immediately."

However, if resources permit and other aspects of this report are considered practical, the Sub-committee feels that a demonstration study, using existing facilities, of an optional expanded school service

of preventive and treatment care for children in appropriate geographic areas of the province is desirable.

The dental plan (Recommendation 22) will serve as a demonstration model to provide information relative to rate and efficiency of the incremental selection of age groups, and the type of service that will be suitable as resources permit.

RECOMMENDATION 29
THAT a pilot course be established immediately to provide a selected group of hygienists and assistants with the proposed additional training.

The Sub-committee is concerned that the administrative mechanism to encourage and organize research in respect to expanded duties of auxiliaries, programme evaluation, and dental disease prevention, does not exist and feels that a co-ordinating committee composed of a variety of interested persons is desirable.

RECOMMENDATION 30
*THAT a committee, made up of representatives from appropriate dental organizations, the Faculties of Dentistry of Ontario, the public, and government, be set up by the Ontario Department of Health to evaluate existing dental programmes and to co-ordinate and encourage research in such matters as dental care delivery systems and dental disease prevention.**

RECOMMENDATION 31
THAT demonstration models be organized without delay to provide information relative to:

a. Productivity, efficiency, and cost-effectiveness of the "team approach" to dental service;

b. Evaluation of private solo and group practice systems;

c. Cost-effectiveness comparison between publicly owned and operated clinics and private group practice systems;

* The Ontario Council of Health referred Recommendation 30 to its Executive Committee with regard to recommending mechanisms of implementation.

d. Cost-effectiveness of programmes involving dentist remuneration by salary, sessions or other method, and fee for service;

e. The most effective methods of providing efficient quality service to citizens residing in under-serviced areas of the province;

f. An evaluation of the dental plan (Recommendation 22) previously recommended.

Appendix A

GLOSSARY

APPENDIX A

Glossary

CURRENT CLINICAL DENTAL TERMINOLOGY 1963 (C. V. MOSBY) CARL O. BAUCHER – EDITOR

Bite – a means of determining the relationship of upper and lower jaws to each other in order to construct prosthetic appliances.

Bite-Wing radiograph – cavity detection X-ray photographic films.

Bridge – a non-removable dental appliance replacing missing teeth.

Cast – a plaster or stone replica of shape of the teeth and adjoining tissues.

Clinical Technician – a person trained and skilled in the performance of dental technical procedures with upgrading as outlined within the report.

Continuing Education – short postgraduate courses for dentists and auxiliaries which do not lead to either a degree or a diploma.

Dental Assistant – an auxiliary to the dentist (usually female).

Dental Assistant with advanced training – an auxiliary to the dentist with expanded duties as outlined within the report.

Dental Associate – an auxiliary to the dentist who carries out all the duties of the dental therapist and in addition is trained to prepare

and fill and extract teeth of children where these procedures are relatively uncomplicated. The dental associate works independently but under the supervision of the dentist. (Annex "C", Health Manpower, p. 65.)

Dental Caries – decay of teeth.

Dental Chairside Assistant – an auxiliary to the dentist who assists directly at the operatory chair in handling of instruments, preparation of materials, and preparation and dismissal of patients.

Dental Hygienist – a person trained in an accredited school or dental college and licensed in the state or province in which he resides to practise the art of dental prophylaxis and other dental operations described by law, under the direction of a licensed dentist.

Dental Hygienist with advanced training – a dental hygienist with expanded duties as outlined within the report.

Dental Team – a group of trained individuals (dentist, hygienist, assistant, secretary, receptionist, office manager, and technician) who serve together in the practice of dentistry to deliver dental service and treatment.

Dental Technician – a person trained and skilled in the performance of dental technical procedures which do not require this person's contact with the patient.

Dental Therapist – an upgraded dental hygienist who performs all the duties of a hygienist plus procedures in restorative dentistry, prosthetic preliminary impressions, preventive dentistry, periodontics and oral surgery (Annex "C", Health Manpower, pp. 64-65).

Dentifrice – a pharmaceutical compound utilized in conjunction with the toothbrush to clean and polish the teeth. Contains a mild abrasive, a detergent flavouring agent binder, and possibly various medicaments designed as cavities preventatives.

Dual System – the delivery of dental care services to a community by private practitioner and public health dentist, both systems operating in the same area at the same time.

Exposure of Radiograph – the technique by which an X-ray film obtains the appropriate image by means of radiation, which is measured in roentgens.

Four-handed dentistry – a method of delivery of dental service to a patient utilizing the chairside assistant working at all times with the dentist.

Gingival tissues – the fibrous tissue and mucous membrane that immediately surrounds a tooth (gums).

Graduate education – a course of instruction and study following the completion of an undergraduate programme leading to a degree.

Group Practice – the practice of dentistry by two or more dentists sharing facilities and personnel. One or more dentists may be specialists.

Impression – an imprint or negative form of the teeth and/or other tissues of the oral cavity, made in a plastic material which becomes relatively hard, or set, while in contact with these tissues.

Incremental dental care – a method of providing dental care to groups of people according to age. At selected intervals of time, additional groups may be added in successive numerical order of age.

Interceptive orthodontics – the early treatment of anterior and posterior crossbite and oral habits, with or without appliance therapy, to preserve satisfactory relationships of bite and alignment of teeth.

Malocclusion – any deviation from an acceptable contact of opposing teeth and dentitions.

Oral Hygiene – the practice of personal oral (mouth) cleanliness.

Periodontal disease – inflammation and/or infection of the supporting structures of the teeth (gingivae, periodontal membrane, alveolar bone, etc.).

Postgraduate Education – a course of instruction and study following

the completion of an undergraduate programme leading to a diploma.

Processing of Radiographs – the technical photographic laboratory darkroom procedure required to convert the roentgen image on an X-ray film to a visible image.

Prophylaxis – a procedure of removing extraneous materials from tooth surfaces by scaling and polishing techniques.

Prosthetic denture – an artificial replacement for one or more natural teeth; reference in this report is to a removable replacement.

Pulp protection – medicated linings placed into cavities to permit healing and relieve irritation to the nerve of a tooth.

Radiograph – a shadow image of an object made by radiation from a radioactive substance (X-ray).

Restoration – filling – a broad term applied to any filling material used to replace loss of tooth structure.

Rubber dam – a thin sheet of rubber used to isolate a tooth or teeth for restorative procedures.

Study Model – a replica of the teeth and immediate surrounding oral structures, not used to fabricate any replacement for missing teeth.

Traumatized Anterior teeth – use in this report refers to fractured front teeth as a result of an accident or injury.

Appendix B

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APPENDIX B

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5. Letter from Dean R. C. Aikin to Dr. A. B. Hord, dated March 11, 1970. (See Item 5, following.)

6. Report to the Ontario Dental Association Auxiliary Services Committee (Appendix C) by Dean R. G. Ellis regarding increasing the number of students at the University of Toronto Dental Faculty, 1968. (See Item 6, following.)

7. Letter from Dr. W. J. Dunn to Dr. A. B. Hord, Dated November 5, 1969. (See Item 7, following.)

8. Letter from the president of the 1970 graduating class of the University of Toronto Dental Faculty to Dr. A. B. Hord, dated April 29, 1970. (See Item 8, following.)

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ITEM 5

**Letter from Dean R. Catherine Aikin,
Faculty of Nursing, University of Western Ontario,
London, Ontario,
to Dr. A. B. Hord, Faculty of Dentistry,
University of Toronto, March 11, 1970.**

In reply to your letter of February 27, 1970, I am pleased to send you some information in relation to the inclusion of content in dental and oral care in our basic nursing program.

Dr. Martinello of the Department of Social Dentistry meets regularly with representatives of our Faculty to discuss the contribution of the Faculty of Dentistry to our programs. Within the four-year basic degree program, we see a need to approach this area of health promotion in a developmental manner. In the first year, there is a general overview to provide students with an understanding of the need for oral hygiene from the physical, emotional and social viewpoints. This is accompanied by a laboratory on "How to Brush Teeth". This may involve four to six class hours. Within the second year, the emphasis is placed on family dental health, including dental health during pregnancy and various age levels during childhood. Two to four hours are assigned. During the third year, the program includes prevention and management of specific oral and dental problems in the adult and child. Again, two to four hours are assigned. During the fourth year, discussions are held regarding dental care as an integral part of health care of the Canadian people. This is included as one aspect of a course in Preventive Medicine which our students take with the medical students. Application of knowledge of dental health is included in nursing practice and seminars.

We have not developed the content as specifically for our registered nurse program. We are planning a workshop to include the students in all three years of the program to explore this area of health care.

You may be interested to learn that recently the health sciences students with faculty advisors held an interdisciplinary conference on the care of a child with cerebral palsy. Students from Medicine, Dentistry, Medical Rehabilitation (Physio Therapy) and Nursing discussed their role in the care of children with this particular problem. All groups seem to believe they had learned from each other.

We agree with you that the nurse can certainly assist in public education of prevention of dental disease. We feel that our planning with the Faculty of Dentistry should be an ongoing activity and, hopefully, we will improve in the future.

If I can send you any further information, please do not hesitate to write to me.

ITEM 6

Report to the Ontario Dental Association Auxiliary Services Committee (Appendix C) by Dean R. G. Ellis, Faculty of Dentistry, University of Toronto, 1968.

Dean Ellis pointed out that a visit he had recently made to Australia had been of a personal nature and had, in no way, been at the request of the Faculty, ODA, RCDS, CDA or the Government. While in Australia, the Dean took the opportunity of visiting two or three dental schools and of observing the auxiliary training program which is being implemented by the S. Australian government.

Dean Ellis does not foresee preparing an official report, however if one is prepared, then it will be directed through whichever channels he feels best.

In S. Australia, the government is sponsoring the training of dental teams, each team to be composed of one fully trained dentist, two dental "therapists" (who are permitted to place restorations, etc.) and perhaps an assistant. The government is building the clinics and paying the students throughout school, in return the students are required to complete a five year period of service as part of the team.

The Dean pointed out that this scheme is not yet in operation, the first class of fifteen therapists will graduate in July. The S. Australia Dental Society is in favour of the program, however some of the Australian states have not yet announced their approval.

Dean Ellis does not support the Government's view that there is a critical shortage of dentists, in his opinion the problem is one of mal-distribution of dentists.

A letter had been received by the Dean from the Association of Canadian Faculties of Dentistry, requesting an outline of the Faculty's attitude towards the utilization and training of auxiliaries. The members of the ACFD feel that this information is necessary if they are to reply to an enquiry received from the "Ad hoc Committee on Dental Auxiliaries" chaired by Mr. Dalton C. Wells, asking what dental schools are thinking with respect to auxiliaries.

The University of Toronto Faculty has not yet replied to the ACFD, but the views which are expressed will be those of a special committee and not the views of one man.

Before the special committee makes any recommendations or expresses its views, Dean Ellis plans to request the RCDS and the ODA to express their opinion on whether or not they feel there actually is a shortage and, if so, what documentation is available to prove this. The Dean does not think the Faculty would put on a program to graduate twice as many dentists without this proof that the dentists are needed.

The first priority of the Faculty at the University of Toronto at this time is to train more teachers, plans have been prepared to greatly increase the size of the Faculty building, but much of the space is intended for use in specialty areas particularly post-graduate work.

The Government could exert pressure on the University since they feel there is a shortage of dentists, perhaps by relating this to the need for funds for the proposed expansion, making the funds available only if more undergraduate dentists will be produced.

The Faculty has considered changing the program to allow two classes of 80 students to graduate each year. If this plan were implemented, the school would have to remain open 46 weeks per year, which would require all students to be subsidized at a cost of approximately $1,000,000 per year. The staff would have to be increased by approximately 60% – the present ratio of staff to students at the University of Toronto is 1/11, whereas the national ratio is 1/6.5. In the Faculty of Dentistry, full-time staff members spend 31% of their time on administration, whereas in other parts of the University the time spent on administration by full-time staff members is only 15%.

If the clinic is to remain open during the summer months, the

building would require air-conditioning. These points would be included in any submission made to the Minister of Health, if he requested an accelerated course.

The Dean does not feel that the problem of supplying dentists to the outlying communities in Ontario can be solved by increasing the number of graduating dentists. No improvement would show during the first ten years of such a program, since statistics show that the great majority of graduates remain in Toronto.

The Dean stated that there are no plans to extend the school of hygiene at present. It would appear that a similar situation exists with respect to hygienists as with dentists, even if the number of graduates is drastically increased, this does not necessarily mean that the hygienists will locate in the outlying areas.

The Dean's earlier feelings of doubt regarding the training of hygienists in other than a university have been somewhat modified by his awareness of what is happening in the schools of hygiene in the community colleges of the United States.

Dean Ellis feels that perhaps male hygienists would be more likely to remain in the work-force longer than the average six to eight years of the female hygienist.

The Dean does not feel that the productivity of the dental profession would be noticeably increased by offering postgraduate courses in the efficient use of dental auxiliaries. Although he expressed the hope that, in five or ten years, all graduating dentists will employ an assistant.

Approximately 15 days, or three working weeks, of training in four-handed dentistry is given to dental students. The Faculty is not in a position financially to employ additional assistants at this time.

Dean Ellis repeated his feeling that the existing problem is not one of shortage but of mal-distribution and, as such, is a problem for the RCDS and ODA and not for the Faculty to resolve.

The main areas of concern at the present time are those rural communities which are exerting pressure upon the Minister of Health.

The Dean feels that the problem can best be solved by a civilian

corps of dentists, perhaps under government control, which will take services into isolated areas.

The student could serve for a period of one year, immediately following graduation on a compulsory basis, similar to Internship in Medicine, Articling in Law and Internship in Pharmacy.

The Government would be required to either build and equip clinics in the communities in question or to establish dental departments in presently existing hospitals in outlying areas.

This program would require inspection, control, etc., and of course a decision regarding the method of allocating locations to the students. Some thought should be given to allocating two dentists to each location.

The Dean, in conclusion, reiterated that the Faculty will not make a report to the ACFD until a statement has been received from the RCDS and ODA.

ITEM 7

Letter from Dr. Wesley J. Dunn,
Dean of Dentistry, University of Western Ontario
to Dr. A. B. Hord, November 5, 1969.

As the subject of mandatory dental internship is one to which, I fear, I am now even emotionally committed I am pleased to reply to your letter of October 31st.

Perhaps the easiest way of starting – what purports to be a rather lengthy letter – is to plagiarize certain observations I made to the Board of Directors of the Royal College of Dental Surgeons in my annual report presented to the Board in June 1967. In commenting on the work of our Curriculum Development Committee I attempted to stress the complementary nature of the interests of the Board and the interests of the Faculty in the "product of the educational process." The following comment was made in the 1967 report:

> "Dental schools in Canada and the United States are charged with a responsibility not assumed by any other professional educational institution. It is expected that the graduate of a

Canadian dental school will have a solid foundation of basic sciences, he will have a broad theoretical awareness of the subjects indigenous to the art of his profession, and he will be competent in the application of that art. It is quite unrealistic to expect a modern dental school adequately to discharge that full range of responsibility in four academic years. In Medicine, before the graduate of a Faculty of Medicine is permitted to practise, he must complete an internship program. The legal profession requires of its graduate several months of articling following a bar admission course. When the young engineer has graduated he, almost always, assumes a very junior position in which he performs his professional functions under the supervision of someone more experienced. The neophyte teacher is responsible to a department head, a vice-principal, and a principal, and follows procedures which have been rather meticulously outlined for him. The graduate nurse, by the very nature of her discipline, performs her services under supervision.

Of all the major professions it is only dentistry which expects its graduates "to be off and running" the day they receive their university degrees. Not only are these graduates expected to be able to perform a wide range of treatment services but there is an expectation that they have a rather comprehensive appreciation of effective and efficient practice administration including the utilization of auxiliary personnel. It is time that the profession recognizes that the modern dental school, if it is to give appropriate attention to basic sciences and to the theoretical aspect of clinical sciences, cannot hope to produce graduates sufficiently competent to engage in immediate independent practice. Unless the dental school is able to liberate much more time in the undergraduate curriculum to permit greater attention to basic sciences then the profession will have to continue to be content to find, except for only a handful of its members, itself outside the main stream of the biological sciences in Canada. We are simply not producing dental scientists proportionate to our professional complement.

As the functions of the school and the licensing authority are virtually inseparable in this area this Faculty is hopeful that the Board will give serious attention to this matter to the end that from the joint deliberations of the Board and our Council we may develop a program which will assure a body

> of practitioners well founded in the basic sciences, thoroughly familiar with all subjects bearing on the art of the profession and possessing the technical competence and administrative experience to render a superior quality of treatment services."

What all this is saying, Bruce, is that we should have a mandatory internship program.

Now having said that – and as one who was responsible for the administration of the Dentistry Act of Ontario for approximately nine years – I am not at all unmindful of the tremendous difficulties in implementing such a procedure. Were we to be in possession of a broad array of hospital resources such as are available to Medicine we should have no problem. But the number of viable hospital dental departments in this province could without too much difficulty be put in your eye.

I think, although it did not work too well many years ago, that we should study again the indentureship arrangement but only at the postgraduate level. I think that it is quite possible to select a competent body of practitioners eligible to act as "mentors" to recent graduates during the early months of their clinical experience. I do not believe that the new graduate should be used as "cheap labour" to go off to a mile or two below the Arctic Circle to deliver needed dental services. If the indentureship arrangement is to be meaningful I think it requires the gentle supervision of an experienced practitioner. If new graduates are simply to be sent somewhere unsupervised then there is no intellectual reason, in my opinion, why they shouldn't be able to practise unsupervised at the corner of Bloor and Young Streets in Toronto. I believe, Bruce, that about six months would be an appropriate period of time. It may be that slightly less than that would be satisfactory or, again, it may be found through experience that more time than six months would be required. I think, however, that six months is a good springboard from which we could leap into the pool.

I believe the internship program should be directly under the administrative purview of the Board of Directors of the Royal College of Dental Surgeons of Ontario. I believe that the Board will have to assure, on staff, an officer who could give this program his almost undivided attention. In other words, the Registrar would require someone to perform the administrative function and to render appropriate supervision.

I am absolutely convinced, Bruce, that the present practice of dental graduates being able to go into immediate unsupervised practice is untenable in 1969. I think it is essential that we develop some complementary clinical arrangement to permit the dental schools to dilute the "application of the art" component of the program in order to stress the other two aspects which the school is obviously most capable of doing.

Thank you, Bruce, for the opportunity of permitting me to comment on this highly important topic.

ITEM 8

Letter from the President of the 1970 Graduating Class, Dr. S. J. Falconi, University of Toronto Dental Faculty, to Dr. A. B. Hord, April 29, 1970.

Further to our discussions throughout the year on matters of course content, curriculum, intern or externships and dental public health, I wish to outline some of the thoughts of the graduating class and the student body at large.

As president of the graduating class of 1970 and vice president of the Dental Student's Society, I had the opportunity to gather the thoughts, ideas and feelings of the student body, especially while I chaired a committee to review the curriculum.

The most astonishing revelation is the complete lack of opportunity for new graduates to gain extra experience in the field under a limited supervision, or better, working alongside more experienced practitioners and/or clinicians.

Conservatively speaking, about 70% of the student body expressed a desire for such an opportunity immediately after graduating and before setting up private practice. However, the majority expressed the necessity of earning a fair salary while rendering service and gaining experience.

It is my humble opinion that out-patient departments or special "clinics" which would cater to indigent patients, the welfare recipient, the new Canadians in the process of establishing in Canada,

and all marginal income groups, would serve a twofold purpose. Firstly, it would offer supervised "Denticare" to the needy and secondly, it would offer the ideal opportunity to the new graduate seeking experience and guidance from special clinicians beyond the academic level.

Thanking you, Dr. Hord, and trusting these few thoughts may some day find their way into schemes for the betterment of the profession at large and at the same time expanding dental health to the public.

ITEM 11

Letter from Dr. John A. W. Chomyn, to Dr. A. B. Hord, May 5, 1970.

I understand you are to present a brief on Dental Health Delivery to the Council of Health. There will be some consideration given to the introduction of New Zealand type personnel to do dentistry for children and I wish to express my view as a dentist who has been engaged in childrens' dentistry for fifteen years.

Child dentistry is neither simple nor unimportant and I cannot surmise how a philosophy, however outdated in nature, keeps reappearing in the minds of grown men that if it is second rate or poor service let's give it to the children. As is well known, in most hospitals it exists even today where the nearly condemned wings of the hospital are always put to use for children. Yet I do not see the Medical profession granting licences to two year trainees to actively treat sick children.

The average person today wishes to have only the best treatment for his child and would hardly accept services of partially trained personnel. Though such practices might be politically expedient, the eventual result would be disastrous as is noted in one year 1962, in a report by the British Health Ministry, where they claim that sixty thousand children under the age of sixteen were fitted with artificial prosthesis. Although the report was intended to illustrate excellence of such service it is plain to see that they created sixty thousand permanent dental cripples in one year.

Surely our aim cannot be this. We know that through education

and preventative treatment it is virtually possible to eliminate dental disease. Is it not wise to act in this direction? Politically it is not as sensational but the results would unquestionably be better.

ITEM 12

Letter from Dr. William C. Deacon to Dr. A. B. Hord, May 5, 1970.

I write to you as a former resident interne at the Hospital for Sick Children, a member of the Canadian Society of Dentistry for Children, dental Advisor to the Ottawa Children's Aid Society, and a practitioner of children's dentistry exclusively for ten years. I write in full awareness of the desparate shortage of dental services available to the citizens of this province, and particularly the unavailability of dentistry to the indigent, low-income and handicapped.

Currently I understand your committee is about to recommend solutions to the shortage of dental services, and with your permission may I respectfully offer some personal observations.

There is indisputably a need for more ancillary personnel to dispense dental services, and unquestionably a need to legally permit these personnel to dispense a wider scope of services. Many procedures necessary to oral health are routine in nature, and require a low "judgement" factor. The dilemma in discussing expanded duties of auxiliaries is how far to go. It is compounded by how much supervision can be practically and effectively afforded by the dentist.

To ignore these problems is to pay lip service to quality dentistry. Quality becomes significant in the light of the Moore study, (p. 48, Dental Condition of the Canadian Forces), showing that more than one-third of the operative effort was consumed in replacing defective restorations – and these placed by dentists!

I am continually dismayed at my own efforts, after much experience and practice, study and conscientiousness, to provide a restorative service that will not easily deteriorate. It is particularly difficult to perform high quality dentistry for children for a number of reasons. The morphology of deciduous teeth, narrower latitude for error, a higher wear factor, the generally smaller amount of filling

'mass', usually poorer oral hygiene, changes in occlusion, smaller access to the operative field, and the emotional disposition of children all contribute to the failures found in children's dentistry. In short, I consider the successful restoration of primary teeth very difficult; more difficult I find, than permanent teeth.

Those advocates of the "New Zealand type" of dental auxiliary appear to me to pay little heed to these considerations. Their presumption is that since the primary teeth usually are ultimately lost anyway, poorer quality can be tolerated. Does this attitude recognize the significance of the primary teeth to the ultimate health potential of the permanent dentition?

To take another tack, what significant impact would adoption of the New Zealand system have on the oral health of our children? A study by Beck in the New Zealand D. J., July, 1967 found comparable DMF ratings in both New Zealand and New York children, with the F component higher in New Zealand, and the D component higher in New York. With or without treatment then, tooth loss was comparable. Neither had restorative treatment been able to lessen the need for treatment. Would it be safe then to assume that the New Zealand methods would be an elaborate and expensive way to cure dental diseases? particularly since we know how to control and prevent this malady.

This is not to infer that we have no need for expanded duties of ancillaries in the direction of treatment. Rather it proposes that we do our utmost to assure quality service until preventive measures enable our treatment facilities to accommodate the demand.

ITEM 14

DENTAL TECHNICIANS

Dr. N. F. Anderson

Paper written for the
Sub-committee on Dental Care Services, April 1970.

The dental technician has, in recent years, become oriented to the commercial dental laboratories where he constructs dental prostheses on prescription for the dental profession. Although some technicians still work in dental offices, most are somewhat remote from the dental "team."[6]

Training of Dental Technicians

At the present time, training of dental technicians is largely of an in-service type in commercial laboratories. The Governing Board of Dental Technicians provides evening courses in Toronto for those wishing to be certified as Registered Dental Technicians. The George Brown College of Applied Arts and Technology in Toronto is presently offering a full-time four year programme with graduates receiving the R.D.T.[2] The second class to graduate leaves the college in the spring of 1970.

Manpower

There seems to be no shortage of technicians capable of performing routine prosthetic work. Highly skilled specialists (gold workers, ceramists, orthodontic technicians, etc.) are in short supply because of the lure of high pay in the United States.

Problems in Dental Technology

A study of literature pertaining to dental technology indicates that some unique problems exist.[1,2] There are areas of disagreement between dentists and technicians and between various factions of the technicians' organizations themselves.[4] The problems fall into two categories:

(1) Economic

Many technicians feel that their salaries are much lower than other trades where similar levels of skill and periods of training are required.[1,4] They feel that they are exploited by the members of the

dental profession and by well-to-do laboratory owners. This grievance appears to apply particularly to those technicians who have not achieved the status of Registered Dental Technicians. In an effort to supplement their incomes, some technicians have resorted to the illegal practice of dentistry by providing dentures directly to the public.

(2) **Status**

Some technicians resent the term "auxiliary" when it is applied to dental technicians, feeling that it suggests an unwarranted subservience to the dentist. The term "ancillary" is preferred. It is felt that dental technology has matured to the point where technicians should have greater control of their own destiny. Some technicians assert that only by becoming highly skilled in a specialty, or by becoming a laboratory owner, can they attain adequate incomes.

Requests for Changes in Legislation

Some technicians argue that if they were to provide dentures directly to the public, a superior service would be available at a substantially reduced cost. Other technicians feel that simple denture repairs only[2] should be permitted directly to the public. Still others feel that the technician should have no direct contact with the public whatever, and that the dentist should retain full responsibility for treatment.[1,5] The Ontario Dental Association apparently shares this view.

The Sub-committee feels that criteria used to determine the proper functions of other dental auxiliaries apply also in the case of dental technicians. Delegation of some intra-oral procedures to specially trained "Clinical Technicians" working in association with, and under the supervision of a dentist, might result in services provided at a reasonable cost without a lowering of health standards.

A study of the somewhat scant data available on the subject of dental technicians has led the committee to form some opinions:

– Any method of delivering prosthetic services to the public recommended by the Sub-committee must provide for readily available, high quality services and reasonable cost.

– No system should be established which would encourage patients to believe that loss of natural teeth and the replacement by artificial substitutes was desirable. Concepts of prevention and

conservation should be encouraged.

– It is not certain at this time that prosthetic services provided directly to the public by dental technicians would accomplish these aims. If technicians had to consider the costs of clinical education, provision of clinical facilities, payment of taxes (it is assumed that illegal practitioners at present pay no taxes on their illicit incomes), their fees to the public might not vary greatly from those of the dentists.

– Unless some other individual is properly trained to assume responsibility for diagnosis and treatment planning, these functions should remain the responsibility of the dentist.

– More information is needed on the amount and type of training that might be necessary to properly equip a qualified technician for intra-oral procedures. It might be more practical to train a hygienist for these duties.

– A study of cost effectiveness of some of the established denture clinics (Manitoba, British Columbia, Toronto) and of the dental mechanics programme in British Columbia should precede any decision on a delivery system for prosthetics in Ontario.

– If technicians were permitted to make "simple" repairs directly for the public, the patient would be required to make a decision on what type of repair was necessary before seeking the services of the technician or the dentist. The dentist might choose to send the patient directly to the technician with a prescription for the necessary repair. This might save the patient valuable time, but would not likely lower the cost. Some intra-oral adjustment of repaired dentures is frequently necessary so that clinical facilities would be needed wherever the repair was done. An awkward division of responsibility could result if a dentist were to provide the dentures and a technician repair them.

A splitting of professional responsibility and the creation of a second level of dentistry in Ontario should not be considered until all methods of combining dentist and auxiliaries in institutional and private group practices have been investigated and found wanting.

Recommendation

That a study be undertaken at public expense, with the assistance of

the Royal College of Dental Surgeons and the Governing Board of Dental Technicians to determine methods of training dental technicians in intra-oral procedures so that they may assume the role of clinical technicians. This technician with clinical training would work with other members of the dental team under the supervision of the dentist. Selection and training of a test group might be undertaken jointly by the University of Toronto Faculty of Dentistry and the George Brown College of Applied Arts and Technology.

It is the opinion of the committee that a properly trained clinical technician, working in close association with a dentist, might provide quality prosthetic services to the public with reasonable costs and adequate safeguards of health standards, particularly in private and public group-type practices where maximum efficiency could be achieved. The clinical technician would likely attain earnings and status comparable to highly trained technicians working in the medical field.

1 Guidelines for stabilizing the dental laboratory trade.

2 A submission to the ad hoc committee on dental auxiliaries. Dept. of National Health and Welfare.

3 The Dental Technicians Act.

4 Letter from John Polowko R.D.T.

5 Manifesto of the Manitoba Dental Association on legislation affecting the status of dental technicians.

6 "Auxiliaries and the Team Concept in Dental Manpower," *C.D.A. Journal,* Feb. 1970.

ITEM 19

PRINCE EDWARD ISLAND STUDY USING SPECIALLY TRAINED DENTAL HYGIENISTS

Dr. D. W. Lewis
Paper written for the
Sub-committee on Dental Care Services, May 1970.

Dr. R. G. Romcke, Director of Dental Services for Prince Edward Island, is conducting a study using supervised dental hygienists with extended duties very similar to those recommended by the Sub-committee in this report. This study is funded under a National Health Grant from the Department of National Health and Welfare, Ottawa. A brief description of the study and its objective as taken from the grant application follows:

> The proposed research consists of a study to determine whether specially trained dental hygienists, who insert and finish dental restorations in cavities prepared by a dentist, can increase the productivity of a dentist, to an extent that will make them economically worthwhile in a private dental practice.
>
> This auxiliary may prove to be a practical alternative to the New Zealand dental nurse type of auxiliary which was recommended by the Royal Commission on Health Services but which is unacceptable to the Dental Profession.

Three dental hygienists who have undergone a course of study of about three months at Dalhousie University to prepare them to undertake extended duties are being used. Part of the study is taking place in a mobile clinic in various school regions of the province. Various combinations of teams (dentist, dental hygienist and dental assistant) and equipment (two chairs, three chairs) will be used in the mobile clinic. A most interesting feature of the study is that two of the dental hygienists are free at any given time to work in private dental offices with general practitioners.

Very detailed information on all phases of this study is being tabulated; however, the total study has only been operational for a matter of months and none of these data is available at this time. In correspondence dated February 5, 1970, from Dr. Romcke to the author of this report, it was indicated that after only four weeks in a private office the hygienist with additional duties had substantially

increased office productivity as based on gross income and daily totals of operations performed. At a later meeting with Dr. Romcke on March 9, 1970, it was learned that in one case the new hygienist integrated very easily into one particular dentist's practice routine but that in the other case the dentist hesitated to delegate duties so that office efficiency for a matter of some weeks was rather poor but that this situation has now improved. It is not surprising that this should occur because some dentists obviously will adapt to changing practice patterns and adjust to personality differences more readily than others. Indeed some dentists may find it very difficult to use the new type of auxiliary just as some today would find it difficult to use the present dental hygienist efficiently. Such difficulties may be minimized with the passage of time.